Engineering Research Transforming Our World

Research Funding Opportunities

**Organization:** NSF  
**Solicitation Name:** Hydrologic Sciences  
**Deadline:** Open

**Summary:** The Hydrological Sciences Program focuses on linking the fluxes of water and the components carried by water across boundaries between interacting components of the terrestrial system, as well as the mechanisms by which these fluxes co-organize over a variety of temporal and spatial scales. The program supports the study of hydrologic processes (e.g., rainfall and runoff; infiltration and subsurface flow; evaporation and transpiration), as well as fluxes of water (e.g. in soils, aquifers, and streams). Many projects involve the study of hydrologic transport (e.g., of dissolved solutes, sediment), coupling of hydrological processes with other systems (e.g., ecosystem processes, geochemical cycles, food and energy systems, socio-ecological systems), or hydrologic responses to change (e.g., changes in land use, climate, or watershed management). The program is interested in how hydrological processes couple to and interact with the geosphere, the critical zone, the landscape, and ecosystems, as well as how the water cycle and its coupled processes are altered by land use and climate. Observational, experimental, theoretical, and modeling approaches are supported.


**Organization:** NSF  
**Solicitation Name:** EHR Core Research: Building Capacity in STEM Education Research (ECR: BCSER)  
**Proposal Deadline:** March 29, 2022

**Summary:** ECR’s Building Capacity in STEM Education Research (ECR: BCSER) supports projects that build investigators’ capacity to carry out high quality STEM education research that will enhance the nation’s STEM education enterprise. In addition, ECR: BCSER seeks to broaden the pool of researchers who can advance knowledge regarding STEM learning and learning environments, broadening participation in STEM fields, and STEM workforce development. Researchers of races and ethnicities, genders, sexual orientations, and abilities who are currently underrepresented in their participation in STEM education research and the STEM workforce, as well as faculty at minority-serving and two year institutions, are particularly encouraged to submit proposals. Specifically, ECR: BCSER supports activities that enable researchers to expand their areas of expertise and acquire the requisite knowledge and skills to conduct rigorous research in STEM education. Career development may be accomplished through investigator-initiated professional development and research projects or through institutes that enable researchers to integrate methodological strategies with theoretical and practical issues in STEM education.

Organization: NIH
Solicitation Name: Initiative for Minority Student Development
Deadline: February 1, 2022
Summary: The National Institute of General Medical Sciences (NIGMS) announces an initiative directed toward increasing the number of underrepresented minorities entering careers in biomedical research. This initiative seeks to encourage the development and/or expansion of innovative programs to improve the academic and research competitiveness of underrepresented minority students at the undergraduate, graduate, and postdoctoral levels and to facilitate their progress toward careers in biomedical research. Programs developed under this initiative must be specifically designed to target underrepresented minority students majoring in the biomedical sciences or in medical, dental, or veterinary training who are interested in pursuing research careers. For the purposes of this program announcement, underrepresented minority students are individuals belonging to a particular ethnic or racial group that has been determined by the grantee institution to be underrepresented in biomedical or behavioral research. Nationally, individuals who have been found to be underrepresented in biomedical or behavioral research include, but are not limited to, United States citizens who are African Americans, Hispanic Americans, Native Americans and Natives of the U.S. Pacific Islands. The term "science" is used in this program announcement to mean the natural, physical, and behavioral sciences and mathematics relevant to biomedical research. Awards under this program will use the institutional education project (R25) grant. Responsibility for the planning, direction, execution, and tracking for evaluation of the proposed project will be solely that of the applicant. Link: https://grants.nih.gov/grants/guide/pa-files/PAR-97-013.html

Organization: DARPA
Solicitation Name: Artificial Intelligence Exploration (AIE)
Deadline: Open
Summary: The mission of the Defense Advanced Research Projects Agency (DARPA) is to make strategic, early investments in science and technology that will have long-term positive impact on our Nation’s security. In support of this mission, DARPA has pioneered groundbreaking research and development (R&D) in Artificial Intelligence (AI) for more than five decades. Today, DARPA continues to lead innovation in AI research through a large, diverse portfolio of fundamental and applied R&D AI programs aimed at shaping a future for AI technology where machines may serve as trusted and collaborative partners in solving problems of fundamental and applied security. The AI Exploration (AIE) program is one key element of DARPA’s broader AI investment strategy that will help ensure the U.S. maintains a technological advantage in this critical area. Proposals submitted in response to an AIE Opportunity must be UNCLASSIFIED and must address two independent and sequential project phases (a Phase 1 Feasibility Study (base) and a Phase 2 Proof of Concept (option)). The periods of performance for these phases are specific to each AIE Opportunity but are anticipated to be approximately 3-9 months for the Phase 1 base effort and 9-15 months for the Phase 2 option effort. Combined Phase 1 base and Phase 2 option efforts for any AIE Opportunity are limited to 18 months. Specific technical objectives to be achieved, task descriptions, intellectual property rights, milestone payment schedule, and deliverables will be addressed in each AIE Opportunity. Link: https://sam.gov/opp/b04934de80af4f5b92ab51852266c8c7/view